

consider their invention and to overcome the rejection of claims 8-15 under 35 USC § 102(b) and 103 (a). Applicants submit the claims as amended contain subject matter which is described by the specification (as amended) and therefore request that the Examiner issue a Notice of Allowance.

Rejections under 35 U.S.C. § 112

In response to the Examiner's rejection of Claims 1-15 under 35 U.S.C. § 112, first paragraph, the specification, at page 10, line 4, has been amended to clarify what is meant by a chemical precursor to a water-soluble polyacrylate. The first full sentence of page 10 has been amended to read "The superabsorbent precursor for use in the present invention may, for example, be selected from the group of chemical precursors to water-soluble polyacrylates which, upon cure, possess the required ability to absorb and desorb large quantities of water, as has been previously mentioned." This amendment to the Specification distinguishes the precursor to a super absorbent (in a pre-cured condition) and the superabsorbent (in a post-cured condition) itself. The Specification, as amended, would provide one skilled in the art to make and use the invention. Applicants submit that no new matter is entered by the amendment to the Specification as the precursor is fully defined in several instances, for example Page 9 (line 21, *et seq.*).

Response to Rejections under 35 U.S.C. § 102(b) and 103(a)

In response to the rejections of claims 1-6 and 8 under 35 U.S.C. § 102(b) in view of Kono et al or Kroesbergen, Applicants respectfully request that the rejection of claims 1-6 and 8 be reconsidered in light of the amendment to the Specification and to claim 8 to clarify that a 'precursor' is applied. The Kono et al. reference discloses a cable including a water absorbing composition layer 2 formed on a substrate 1 from a water-absorbing resin 3 and a binder 4 blended with the resin. It is clear that curing takes place before application to the article. The Kroesbergen reference explicitly teaches allowing suitable monomers to polymerize in the presence of a catalyst in order to obtain a polymer solution, adding a cross-linking agent to the polymer solution to obtain a pasty composition and then subsequently applying the composition to a substrate. The art cited by the Examiner explicitly teaches curing and cross linking the superabsorbent polymer prior to applying it to the substrate or article. Thus, Applicant submits that the rejection under 35 USC § 102 based upon the Kono et al. or the Kroesbergen reference should be withdrawn.

Similarly, with respect to the rejection of claims 9-15 under 35 U.S.C. § 102(b) or in the alternative 103(a), for the reasons discussed above the Kono et al. and Kroesbergen references provides no motivation to lead one skilled in the art to treat an article with a precursor rather than cured resin. Applicants therefore submit that the Kono et al. and the Kroesbergen references do not provide any basis for a rejection under 35 USC § 103. Thus, Applicant submits

that the rejection under 35 U.S.C. § 102 or in the alternative 103(a) based upon the Kono et al. or the Kroesbergen reference should be withdrawn.

In response to the rejection of claims 1-5 and 8-15 under 35 U.S.C. § 102(b) or in the alternative under 35 U.S.C. § 103(a) in view of the Gaa et al. or Cossement et al. references. The objective of Gaa et al. is to provide non-woven, sheet-like mats having appropriate properties for use as base materials for roofing products such as shingles. One of ordinary skill in the art would recognize that Gaa et al. is not teaching the production of a shingle product with superabsorbent capacity as such a product would lead directly to overloading of the roof structure from weight of absorbed water. Applicants submit that the Gaa et al. reference relates to a water shedding product rather than a water-swelling article and thus Applicants submit that the Gaa et al. reference is not pertinent to the patentability of the present invention. Accordingly, Applicant requests that the rejection of claims 1-5 and 8-15 based upon the Gaa et al. patent be withdrawn.

The Cossement et al. reference relates to a sizing composition for coating reinforcing polyamide resins. There is no suggestion in the Cossement reference to indicate that the composition may be used in any end-use application as a coating that is exposed to an external environment where water is absorbed as a means of protecting the coated surface from water permeation. The composition is not used to prevent water permeation.

In response to the rejection of claims 1-15 under 35 U.S.C. § 102(b) or

alternatively under 35 U.S.C. § 103(a) in view of Arroyo et al. and Geursen et al. references when considered in combination with the Barch et al. reference. The Arroyo et al. and Geursen et al. references both fail to teach or suggest the use of a viscosity modifying agent or a film forming binder selected from a group consisting of polyesters, polyurethanes, epoxies, latex and mixtures thereof as set forth in claim 1. The Arroyo et al. reference provides no suggestion that a film forming binder or a viscosity-modifying agent would improve these properties. The Barch reference does not relate to superabsorbent polymer coating technology. The Barch reference discloses an applicator such as a pad or roller for applying coatings of varying viscosities to substrates in order to achieve a more uniform finish of the coating on the substrate. At column 6 lines 18-20 Barch does teach utilizing film forming polymers in chemical treating compositions for such applicators but this teaching does not relate to superabsorbent polymer materials nor does it predict what would happen if superabsorbent polymer materials were modified to incorporate a binder, therefore one of ordinary skill in the art would not look to the Barch et al. reference to modify superabsorbent polymer compositions to add any binder. With respect to the Guersen et al. reference, Applicants submit that there is no suggestion of a film forming binder or a viscosity modifying agent with any water soluble superabsorbent polymer. The Guersen et al. reference teaches a water-and-oil emulsion containing a superabsorbent material rather than a polymer precursor. As noted above, the secondary reference to Barch et al. is unrelated to superabsorbent materials. As such, Applicants submit that one of ordinary skill in the art would not seek to modify

the Guersen et al. reference based on the disclosure of Barch et al. Applicants therefor request that the rejection of claims 1 -15 be withdrawn.

Summary

In summary, the pending claims clearly patentably distinguish over the prior art. Accordingly, the early issuance of a formal Notice of Allowance is earnestly solicited. If any fees are required pertaining to this response, the Applicants request that they be charged to Deposit Account number 50-0568.

Respectfully submitted,

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24649A

Docket No. 24649A (599-002)

Patent

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

|  |   |                 |
|--|---|-----------------|
| In re application                                | : |                 |
| Applicant: Martin C. Flautt et al.               | : |                 |
| Serial No.: 09/409,457                           | : |                 |
| Filed: September 30, 1999                        | : |                 |
| For: SUPERABSORBENT WATER-<br>RESISTANT COATINGS | : | <b>RECEIVED</b> |

NOV 6 2002  
**TC 1700**

**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the Claims**

8. (Twice Amended) A composition for use as a water-resistant coating comprising:

a superabsorbent water-soluble polymer[, wherein the superabsorbent polymer is obtained as an aqueous solution of a polymer] precursor; and a binder selected from a group consisting of polyester, urethane, epoxy, latex and mixtures thereof and is cured to form a superabsorbent polymer.